



Have you ever gotten a dirt stain on your favorite t-shirt? Don't throw it away! Make your very own DIRT SHIRT.

Challenge: A t-shirt company needs your help to create a t-shirt using dirt as a dye. Your shirt should have a “dirt quote” and you must stay within a \$10.00 budget. You may only use the materials from the materials list.

ASK

For this challenge, I have identified the problem and constraints for you.

- **Problem:** How can dirt be used as a dye for t-shirts?
- **Constraints:** \$10.00 budget, materials listed, must have a dirt quote that can be read from a distance of 1 yard.

Material	Cost
Black sharpie marker	\$1.00
White cotton t-shirt	\$3.00
½ cup Vinegar	\$1.00
½ cup salt	\$1.00
1 cups of dirt	\$2.00
Gallon ziploc bag	\$1.00
5 Rubber bands	\$1.00
1 Paint stirrer	\$1.00
Water	Free
Duct tape 1 foot	\$1.00
5 gallon bucket	\$2.00

- **Gather Information:** Use these resources to help you create a “dirt shirt” with a “dirt” quote.

[Original Red Dirt Shirts](#)

This video shares the original Red Dirt Shirts made in Hawaii.

[Prince Edward Island Dirt Shirt](#)

Dirt shirts made from Prince Edward Island dirt.

[DIY Red Dirt Shirt](#)

Step-by-step video for making your own dirt shirt.

[How to Dye a Shirt](#)

Step-by-step directions with pictures for dying shirts.

[Earth Day Shirts](#)

Earth Day Shirt activity for dying shirts with mud.



IMAGINE

- Brainstorm: Discuss ideas for how to dye a t-shirt and a dirt slogan for the shirt. Write down and/or sketch every idea suggested. Remember no idea is “too silly” at this stage.

Dye Process & Design

Dirt Quote

PLAN

- Choose: Pick an idea you think will work best. Describe and/or sketch your idea below.

BUDGET

- Budget: Use the table to determine how much you will spend on materials. Remember your budget is \$10.00.
(There is a no return policy.)

Material	Cost per unit	Number of units	Cost
Example – black sharpie marker	\$1	2	\$2
TOTAL			

CREATE

Purchase the materials on your list and create your t-shirt prototype. Remember to follow your plan. Did your dye work?-

IMPROVE

1. Did your dye process solve the problem and meet the constraints?
Explain, using evidence from your test.

2. If you were given a chance to design another dirt shirt, what changes would you make?

3. If you had a bigger budget (\$15), do you think you could have designed a better shirt?
